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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,582

07/10/2006

Mark Bischoff

3081.154US01

2301

24113

7590

09/21/2009

PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A.

4800 IDS CENTER

80 SOUTH 8TH STREET

MINNEAPOLIS, MN 55402-2100

EXAMINER

EVANS, GEOFFREY S

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

09/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,582	Applicant(s) BISCHOFF ET AL.	
	Examiner Geoffrey S. Evans	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-62 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 30-62 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. There is no claim 61 in the copy of claims submitted 23 January 2006. Accordingly claim 62 has been renumbered as claim 61 and claim 63 has been renumbered as claim 62 under 37 CFR 1.126.
2. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Species I: The removal rate of material processing serves as the measurable quantity.

Species II: A surface roughness serves as the measurable quantity.

Species III: Using a transmission of the object to be processed as the measurable quantity producing of processing an optical wave guide.

Species IV: using a reflection of electromagnetic waves as the measurable quantity for producing of processing an optical wave guide.

Species V: using at least one of the resonance frequencies as the measurable quantity for producing or processing as the micro-mechanical component.

Species VI: evaluating a hydrophobicity or a hydrophilicity of a processing surface as the measurable quantity.

Species VII: evaluating an anisotropy of a processed material as the measurable quantity.

Species VIII: using a material selectivity of an interaction with composite materials as the measurable quantity in the processing of composite materials.

Species IX: using at least one electrical property of said microelectronic component as the measurable quantity in processing a microelectronic component .

Species X: using at least one plasma parameter as the measurable quantity in the treatment of human eye tissue.

Species XI: in two-photon polymerization, wherein the measurable quantities are selected from the group consisting of : a quantum efficiency of the polymerization process, optical properties of the polymerized materials, mechanical properties of the polymerized material and any combinations thereof.

Species XII: measurement unit comprises at least one sensor for measurement of temperature of the material processing (claim

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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3. The claims are deemed to correspond to the species listed above in the following manner:

- Species I: claim 36
- Species II: claims 37 and 59
- Species III: claim 38
- Species IV: claims 39 and 40
- Species V: claims 41 and 42
- Species VI: claim 43
- Species VII: claim 44
- Species VIII: claim 45
- Species IX: claims 46 and 47
- Species X: claims 48,49 and 57
- Species XI: claim 50
- Species XII: claim 58

The following claim(s) are generic: 30-35, 51-56,60,61, and 62

4. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Neev in U.S. Patent No. 6,482,199 discloses a method of material processing with laser pulses that can be as small as 1 femtosecond (see column 8, line 30) to as large as 10 milliseconds (see column 8, lines 31), and adjusting the pulse parameters before or during the process (see column 6, lines 31-65) and further that the pulse parameter can be the pulse duration (see column 10, lines 2 and 3). Liu in U.S. Patent Application Publication No. 2004/0017560 is evidence that changing the pulse width adjusts the spectral bandwidth of the laser pulse (see paragraphs 21-26, especially paragraph 26 and figure 2 that shows both the spectral bandwidth and the amplitude changing). Therefore Neev is adjusting the pulse duration the spectral bandwidth must change. Some in U.S. Patent No. 7,539,045 is evidence that laser pulses that are femtoseconds or picoseconds in duration have large spectral bandwidth (see column 2, lines 50-52). Accordingly there are no special technical features in claim 30 since Neev must be modifying the spectral bandwidth of the laser pulse when Neev changes the pulse duration in the femtosecond region. The spectral bandwidth is considered to be a spectral parameter. Regarding claim 35, Neev discloses adjustment during the process (e.g. see column 6, lines 58-65) which is therefore considered to be "dynamic". Regarding claim 53, the optical elements in element 420 (especially the pulse stretcher (element 426), the regenerative amplifier (elements 430,434) and the pulse compressor (element 436)) are considered to be a pulse shaper that sets the pulse duration and hence the spectral bandwidth and spectral amplitude. Regarding claim 55, Neev further discloses a measurement unit (a feedback transducer, element 1472, see column 55, line 35 to column 56, line 12) and a control unit (a laser controller, element 1478 see column 56, lines 11-12).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S. Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 7:30AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571)-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey S Evans/

Primary Examiner, Art Unit 3742